

MEDICINE TODAY

Current comment on medical progress, reviews of selected books and periodic literature, by contributing editors.

Clinical Pathology, Bacteriology, and Parasitology.

Chronic Carbon Monoxide Poisoning—The dangers from carbon monoxide poisoning gas are becoming quite widely known and appreciated. The *Los Angeles Times* under date of March 13 carried a short article stating that a policeman directing traffic on one of the congested corners in the center of Los Angeles was so affected by the gases inhaled during his hours on duty that he appeared in a somewhat intoxicated condition at the end of the day.

Dr. H. G. Beck of Baltimore, in a paper recently read before the American College of Physicians in Cleveland, gave some interesting facts. He stated that carbon monoxide is nontoxic, but that the danger comes from its close affinity for hemoglobin. This affinity, however, has been greatly overemphasized, for the combination can be broken up rather easily. It is odorless, and is poisonous in a percentage as low as 0.05 per cent when inhaled over a long period of time. An exposure to 0.4 per cent causes definite symptoms in one hour's time. The exhaust from automobiles averages 6 per cent carbon monoxide; and an automobile running in a closed garage will create a dangerous atmosphere in three minutes' time.

Chronic poisoning results in an increased red cell count running from six to nine million, with 95 to 125 per cent hemoglobin, and an occasional eosinophilia. The subjective symptoms are dizziness, headache, blurring of vision, weakness and palpitation. Usually the symptoms disappear quite rapidly upon removal from the influence of the gas.

Experiments have shown that a patrolman at the end of an eight-hour duty may show as high as 30 per cent saturation with carbon monoxide.

Another quite interesting fact that is more frequently overlooked, is the possibility of poisoning by means of the common habit of smoking. Doctor Beck stated that analyses of the blood of smokers who inhale show a very definite amount of absorption in the blood stream amounting to from 6 to 22 per cent saturation. If this work can be confirmed by others, much experimental work must still be done, to accurately determine to what extent exposure to small amounts of carbon monoxide continuously, or periodically over long periods of time, may result in the development of disease, or in shortening human life.

H. E. BUTKA,
Los Angeles.

Obstetrics and Gynecology

Sedimentation Test in Gynecology—It has long been known that if blood is treated with an anticoagulant and allowed to stand, a separation of two constituents occurs, namely, serum and red

blood cells. It has also been recognized that this sedimentation occurred at a definite rate and represents a nonspecific biologic reaction indicating the suspension stability of erythrocytes in noncoagulable blood. In the presence of infection this sedimentation occurs more rapidly, and this variation has been recently employed as an aid to gynecologic diagnosis. The simplicity of the test is one of its recommendations.

Technique—Hard glass tubes 5 mm. in diameter and 6.5 cm. long with a capacity of 1 cc. are used. The tubes are marked at the 1 cc. level and at points 6, 12, 18, and 24 mm. respectively below. Eight-tenths cc. of blood are drawn into a Luer syringe which contains .2 cc. of .5 per cent sodium citrate solution. The mixture is thoroughly shaken and transferred to the sedimentation tubes. The time required for the sedimented red blood cells to reach the 18 mm. mark is noted. Three hours is accepted as within normal limits. A sedimentation time below two hours is considered too rapid and distinctly pathological.

The application of this test in obstetrical practice has been of interest. In the early weeks of pregnancy there has been no marked variation in the sedimentation time, and the test therefore is of no value in the diagnosis at this period. After the fourth month there is a rapid sedimentation which increases with the advance of pregnancy. During the third or fourth week of the puerperium the time returns to the normal limits. In the presence of threatened abortion, and following uncomplicated abortions, the time is reduced to an hour.

With pelvic infection the rate of sedimentation varies directly with the virulence of the infection and the extent of the pathologic involvement. Sedimentation with severe infection may be completed within a few minutes and is closely paralleled by the leukocyte count and temperature curve. However, the diminished sedimentation time frequently occurs before there is any elevation of temperature or leukocytosis and may persist for some time after the latter two have become normal. It may, therefore, be regarded as a more delicate prognostic index as to the proper time for surgical therapy of pelvic infections. The modern conception of the treatment of these pathologic processes demands the recognition of the value of tissue cell proliferation, formation of antibodies and the natural resistance of the individual in effecting a cure, and emphasizes the vital importance of determining the proper time for surgical intervention.

Uncomplicated fibroids in the absence of fever or leukocytes frequently show a diminished sedimentation time which agrees with our knowledge of latent or quiescent infections which are so commonly associated with this tumor formation. Myomata complicated by anemia, and degenerations, as do ovarian tumors, show marked acceleration of the sedimentation time.

Carcinoma of the uterus, even though the tem-